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ABSTRACT

~~The improved method and apparatus for the semisolid forming of alloys to enable shaped parts having a fine-grained, spherical thixotropic structures to be produced in a convenient, easy and inexpensive manner without relying upon the conventional mechanical or electromagnetic agitation.~~ In the method, a liquid alloy having crystal nuclei at a temperature not lower than the liquidus temperature or a partially solid, partially liquid alloy having crystal nuclei at a temperature not lower than a molding temperature is fed into an insulated vessel having a heat insulating effect, held in ~~said~~ the insulated vessel for a period from 5 seconds to 60 minutes as it is cooled to the molding temperature where a specified fraction liquid is established, thereby crystallizing fine primary crystals in the alloy solution, and the alloy is fed into a forming mold, where it is shaped under pressure.